

REMARKS

Claims 14 to 17 were pending in the present application when last examined. Applicant has amended claim 14 and canceled claim 15. Claims 14, 16, and 17 remain pending in the present application.

§102 Rejections

The Examiner rejected claims 14 to 17 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,729,033 ("Hafizi"). Addressing claim 14, the Examiner stated that Fig. 1k and col. 7, lines 22 to 40 disclose the recited heterojunction bipolar transistor. October 6, 2005 Office Action, p. 2. Addressing claim 15, the Examiner stated that col. 6, line 39 to col. 7, line 11 disclose the recited undercut profile of the emitter cap sidewall. Id.

Applicant has amended claim 14 to include the limitation of claim 15, and canceled claim 15. Amended claim 14 now recites, inter alia, "an emitter cap atop the emitter, the emitter cap comprising a sidewall with a reentry feature comprising an undercut profile." Amended claim 14.

Hafizi discloses etching a dielectric mask 32 covering an emitter cap 16 to form a dielectric sidewall 34 on the side of emitter cap 16. See Hafizi, col. 6, lines 39 to 41. Referring to Fig. 1j of Hafizi reproduced and annotated below, dielectric sidewall 34 on emitter cap 16 has a ramp profile that extends outward from top to bottom. Referring to exemplary Fig. 6C of the present application reproduced below, the sidewall of emitter cap 118 has a reentry feature 110 with an undercut profile that extends inward from top to bottom.

The Examiner may have confused an undercut beneath an emitter 10 with the recited undercut profile of the emitter cap sidewall. This is because Hafizi discloses etching into emitter 10 to create an undercut beneath emitter cap 16 as shown in Fig. 1j reproduced and annotated below. See Hafizi, col. 6, lines 46 to 50. However, neither emitter cap 16 nor dielectric sidewall 34 of emitter cap 16 has an undercut profile as recited in amended claim 14. For these reasons, amended claim 14 is patentable over Hafizi.

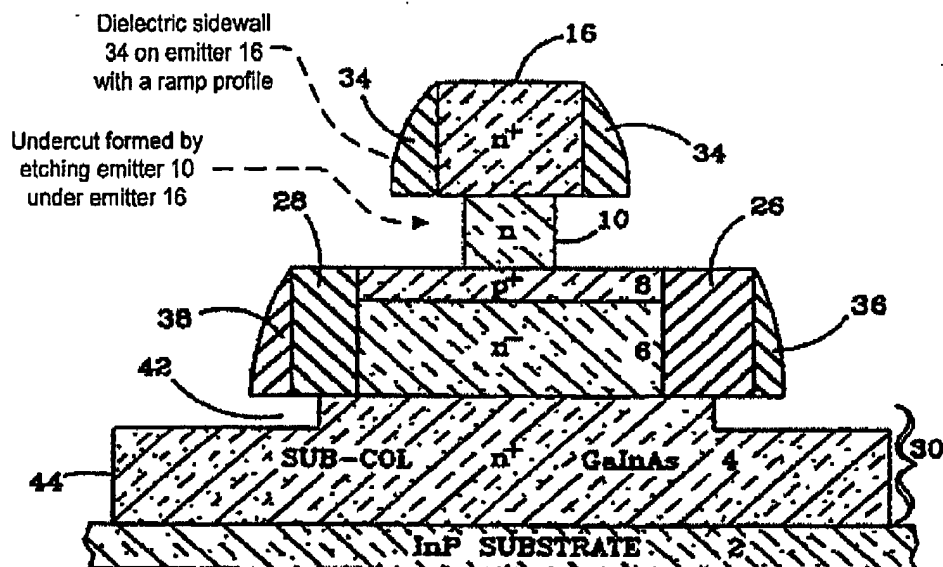


FIG. 1j

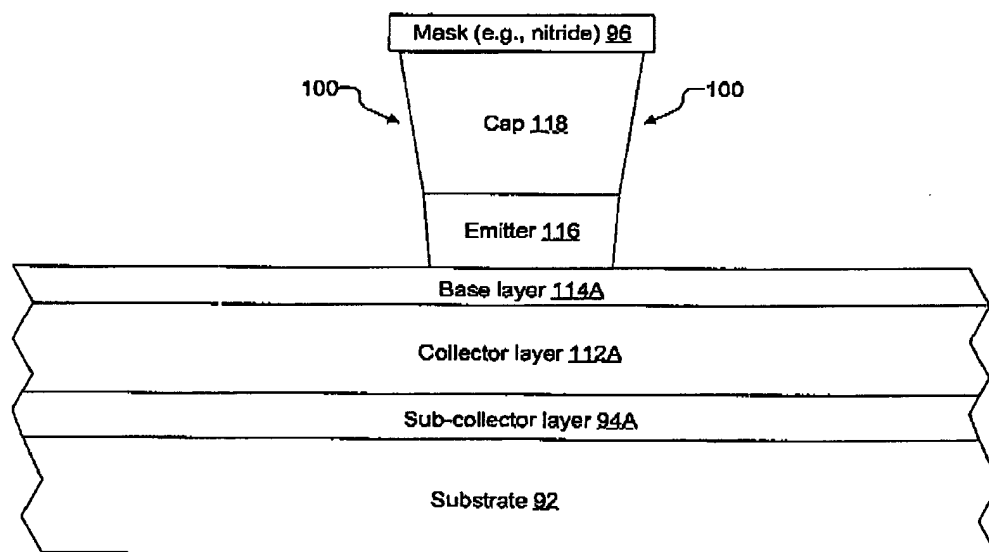


Fig. 6C

Claims 16 and 17 depend from amended claim 14 and are patentable for at least the same reasons as amended claim 14.

Summary

In summary, claims 14 to 17 were pending in the above-identified application. Applicant has amended claim 14 and canceled claim 15. For the above reasons, Applicant respectfully requests the Examiner to withdraw the claim rejections and allow claims 14, 16, and 17. Should the Examiner have any questions, please call the undersigned at (408) 382-0480x206.

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Respectfully submitted,



David C. Hsia
Attorney for Applicant(s)
Reg. No. 46,235